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APPLICATION NO.	ION NO. FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/636,142	08/06/2003		Yoshihiro Ue	01232D/LH	2383
1933	7590	02/23/2004		EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC				FINEMAN, LEE A	
767 THIRD	AVENUE	3			
25TH FLOOR				ART UNIT	PAPER NUMBER
NEW YORK, NY 10017-2023				2872	

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Art Unit: 2872

DETAILED ACTION

Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claim 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada, U.S. Patent Application Publication No. US 2001/0024320 A1 in view of Tomiyama et al., U.S. Patent No. 5,521,762.

Regarding claim 1, Okada discloses a focus stabilizing apparatus (fig. 1) comprising an objective lens (8) arranged opposite to an observation sample (M); a fixing base (7 with 11, when vibration unit as shown in fig. 3 is between 7 and 8; see page 3, section [0052], lines 11-15) for fixing the objective lens; a minute movement table (12) on which the objective lens is provided and provided between the fixing base and the sample base; springs (14) situated between the fixing base and the minute movement table (fig. 3) to allow the minute movement table to be moved in an optical axis direction of the objective lens; an actuator (13) provided between the fixing base and the minute movement table to minutely displace the minute movement table in the optical axis direction of the objective lens (fig. 4)); a displacement sensor (15) for detecting a displacement amount (page 3, section [0049]) of the objective lens; and control means (16) for allowing the actuator to perform an extending/contracting operation on the basis of a detection output of the displacement sensor to control the objective lens and bring it to a just-in-focus position relative to the observation sample. Okada discloses the claimed

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invention except for the springs being parallel springs. Tomiyama et al. teaches an objective lens holder (figs. 3 or 4) with parallel springs (60, 62, 70, 72) that allow a minute movement table (50) to be moved in an optical axis direction of the objective lens (not shown, at 100). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the springs of Okada with that of Tomiyama et al. because the springs can be efficiently manufactured from one piece to save manufacturing time as well as reduce costs (column 6, lines 31-40, Tomiyama)

Regarding claim 2, Okada further discloses a control loop for adjusting distance (page 3, section [0049]) with a memory section for storing an output of the displacement sensor corresponding to a just-in-focus state between the observation sample and a objective lens (in so far as a no vibration state (or zero state) is stored in the controller 16 when the object is in focus); a comparing section (16) for comparing an output of the displacement sensor (p>0) and an output of the displacement sensor stored in the memory section (p=0); and a control section (16) for outputting an electrical signal (s) for canceling a distance variation between the observation sample and the objective lens on the basis of a result of comparison by the comparing section (page 3, section [0049]).

Regarding claims 3, 5 and 6, Okada further discloses a sample base (2) for supporting the observation sample (M); a focus adjusting mechanism and a focus-adjusting handle (unnumbered; fig. 1) between the sample base and the fixing base.

Regarding claim 4, Okada further discloses wherein the objective lens is focused on the observation sample by the focus adjusting means (page 2, section [0037-0038], and then, the control means keeps the objective focused on the observation sample (page 3, section [0044]).

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Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Kikuchi et al., U.S. Patent No. 5,007,712 discloses an objective lens with parallel

spring supports. Moore, U.S Patent No. 4,688,908 and Alexander et al., U.S. Patent No.

6,005,251 disclose using minute movement tables and parallel springs to move elements in a

direction perpendicular to the optical axis.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The

examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Drew Dunn can be reached on (571) 272-23124. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

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LAF

February 5, 2004

MARK A. ROBINSON PRIMARY EXAMINER